

ABSTRACT OF THE DISCLOSURE

The invention relates to an optical transmission system which allows high quality transmission of signal light, and has a configuration that is suitable particularly for CWDM optical transmission. In the optical transmission system, signal channels outputted from non-temperature controlled direct modulation light sources are multiplexed by a multiplexer, transmitted through an optical fiber transmission line, and demultiplexed into a first wavelength band  $\Lambda_1$  and second wavelength band  $\Lambda_2$  by a demultiplexer. The signal channel group in the second wavelength band  $\Lambda_2$  of which the absolute value of chromatic dispersion is large is dispersion-compensated for by a non-temperature controlled dispersion compensator. The chromatic dispersion of the signal channels in the second wavelength band  $\Lambda_2$  after passing through the dispersion compensator is set to be negative over a temperature range of 0°C to 60°C.